crystals, lining pockets in limestone, or when in shale, disseminated throughout the rock-mass. The specimen presented to the Academy is of the latter kind. Its geological position is in hydraulic limestone near the lower horizon of the Water Lime Group. (No. VI. of Penna. Survey.)

Several other minerals have been found associated with the strontianite; among them a strontianitic aragonite, found in fibrous crystalline crusts, generally about half an inch thick. When heated before the blowpipe it gives a red flame, and sometimes slightly exfoliates. A specimen was examined by Dr. Genth, who finds the amount of strontia present to be about one-half of one per cent.

Calcite, ferrocalcite, common aragonite, and fluorite occur at the same locality.

A statement in Prof. Rogers' "Geology of Pennsylvania" (Vol. I. p. 215), referring to the occurrence of strontianite at Marble Hall, Montgomery County, is probably incorrect; barites, which is there plentiful, being mistaken for it.

February 8.

The President, Dr. Ruschenberger, in the chair.

Twenty-nine members present.

Mr. Thomas Meehan remarked that the American correspondent of "Nature" had characterized some recent remarks of his on fertilization by insect agency, as an attack on Mr. Darwin. He thought the members of the Academy would bear him out in the statement that the facts and observations he had from time to time offered were submitted in no spirit of antagonism to Mr. Darwin, but often favored as much as they opposed views held by that distinguished gentleman. Even those who were avowed partisans of Mr. Darwin felt it necessary to strengthen their positions by searching for new facts; surely the mere student who was willing to wait till the evidence was all in, might offer the facts as he found them, without being liable to the charge of direct antagonism. However, he felt fortunate to-night in having two new facts to offer, one of which might favor, and the other oppose some generally accepted views.

Variation in Quercus macrocarpa.—Mr. M. remarked that among many other characters distinguishing oaks, the color of the one-year-old twigs was marked. Some species had purplish-red twigs, as, for instance, the white oak; others, as the burr oak, had gray twigs. This character was remarkably constant through all the species. He exhibited some branches of the burr oak (*Quercus macrocarpa*) in which was a tendency to develop the character of the white oak. From the articulus of the fallen leaf downwards, in some cases extending several inches, was a purple

line similar to the color of the white oak, giving the twig a striped appearance. There was no reason why the whole twig might not lose its gray color and become purple or brown, instead of partially so as now, and no reason why it might not become a permanent and enduring character. It was undoubtedly a fact favoring evolutionary views.

Self-Fertilization in Browallia elata.—Mr. Meehan exhibited specimens of this common green-house annual in flower and with an abundance of perfect seed, and said it had been produced from plants which had no aid whatever from insects in fertilization. The tendency of thought at the present time was to present the generalization that plants were benefited by cross fertilization; that they had come to abhor, so to say, in-and-in breeding, and that color, fragrance, and honeyed secretion in flowers had been developed in these later ages solely as inducements to insects to visit them, and thereby secure this cross fertilization. He did not regard this necessity for cross fertilization—this supposed injury to plants, from in-and-in breeding—to be proved by any means, as there are abundant evidences to the contrary. But undoubted self-fertilizers have existed as long and are every way as healthy as those that cannot now fertilize themselves. It was essential, he thought, that this point should be more fully proved before we could say much about special contrivances for insuring insect fertilization.

That there was a considerable number of plants that could only be fertilized by insect agency, was certainly true, and as remarkable as it was true, and whatever the purport of this arrangement might ultimately be proved to be, they who were working up this field and increasing the number of instances were doing inestimable service to science. But while there were instances of structure which *seem to be* specialized particularly with the object of insect fertilization, it was but right that we should not close our eyes to other structures which just as strongly *seemed* specialized to prevent it. That was the case with the Browallia now exhibited. Not only was it a fact that this plant with such an attractive blue color perfected every seed vessel without insect aid, but the structure of the flower was such that should an insect endeavor to collect the pollen it would only aid, if that were necessary, in self-fertilization. The stigma was nearly the length of the corolla tube; and the anthers, a trifle longer, were arranged closely around it. Two of these were inverted just over the stigma, their backs being densely bearded, and appearing to the naked eye like petaloid processes effectually closing the mouth of the throat. No insect could thrust its proboscis into the tube, except through this dense bearded mass, and if it had foreign pollen, would be thoroughly cleaned by the beard; but the very act of penetration would thrust these anthers forward on to the pistil, and thus aid in rupturing the pollen sacs, and of course the self-fertilization of

the flower. If we are to be told that "all flowers with brilliant colors" have been so developed by the "unconscious agency of insects," as Sir John Lubbock tells us; and if we are to regard peculiarities of structures which prevent self-fertilization, as having been arranged especially with that view and to that end, what are we to say of cases like this of Browallia, with brilliant color, and special structure favoring self-fertilization?

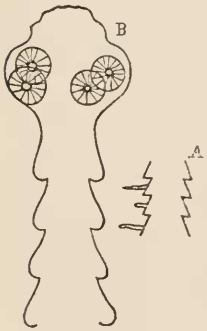
FEBRUARY 15.

The President, Dr. RUSCHENBERGER, in the chair.

Thirty members present.

A paper entitled "Description of a Monstrosity," by H. C. Chapman, M.D., was presented for publication.

Description of a new Tænia from Rhea Americana.—Dr. CHAPMAN called the attention of the members to a new species of Tænia which he had found in the alimentary canal of the Rhea Americana. According to Diesing there exists in the Struthio a tænia, but as no description is given he could not say whether the species are the same. It is very probable, however, that they are so. If future investigation should show this to be correct, it will offer another illustration of closely related forms having the same entozoa. The tænia from the Rhea varies from 9 to 10 inches in length. Its head measures $\frac{1}{33}$ of an inch in breadth and $\frac{1}{25}$ of an inch in length (to beginning of 1st segment). The head is provided with four suckers. The cervical segments are rounded off at the articulations, but the mature ones are serrated. The genital aperture is lateral and alternates from side to side. Sometimes there will be as many as five successive segments on one side exhibiting these apertures, and then five will be seen on the opposite side of the next five successive segments. The penis could be protruded by compression and the vagina readily seen.



From the fact of the head being rather thickly set upon this species, the name *Tænia tauricollis* was proposed for it.